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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,242	09/11/2006	Robert McDonald	Garlic -1 US	8026

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EXAMINER	
ML, QIUWEN	
ART UNIT	PAPER NUMBER
1655	
MAIL DATE	DELIVERY MODE
12/26/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/564,242	MCDONALD, ROBERT	
	Examiner	Art Unit	
	QIUWEN MI	1655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 September 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *1/11/2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant's petition for revival and amendment in the reply filed on 9/23/2008, and 10/9/07, respectively, are acknowledged. Claims 1-15 are cancelled; Claims 16-21 are newly added. Claims 16-21 are pending. **Claims 16-21 are examined on the merits.** Any rejection that is not reiterated is hereby withdrawn.

Claim Rejections -35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 16, and 18 are newly rejected under 35 USC § 102 (b) as being anticipated by Wojdyla et al (Garlic juice in the control of some rose diseases, Bulletin of the Polish Academy of Sciences Biological Sciences, (2001) Vol. 49, No. 3, pp. 253-263).

This is a new rejection necessitated by the Applicant's amendment filed on 10/9/2008.

Wojdyla et al teach Biological activity of garlic juice at concentrations from 0.5% to 5% against rose pathogens Sphaerotheca pannosa var. rosae, Diplocarpon rosae, Peronospora sparsa and Botrytis cinerea was investigated. Effectiveness of the product was compared to untreated control and standard fungicides: triforine 0.03% (S. pannosa var. rosae and D. rosae), oxadixyl 0.016% (P. sparsa) and procymidone 0.05% (B. cinerea). Greenhouse-grown roses were sprayed when symptoms of powdery mildew occurred. After 2 and 4 treatments plant infection level was evaluated. Efficacy of garlic juice against D. rosae was tested on rosa cv. 'Madelon' cultivated in field. Effectiveness of tested chemicals was evaluated after 6 and 11 treatments applied weekly. Activity of garlic juice against P. sparsa was tested on rose shrubs grown in polytunnel after 4 treatments applied. Efficacy of the compound against B. cinerea was evaluated in the laboratory on scratched flower petals. The petals were dipped for few seconds in 0.5%, 2% or 5% water solution (thus an aqueous liquid carrier) of garlic juice (thus applying garlic juice to a plant), dried and subsequently inoculated with B. cinerea. 3, 5 and 7 days after inoculation necrosis diameters were measured. Depending on experiment, date of observation and concentration used, garlic juice showed from 20% to 95% efficacy against S. pannosa var. rosae which was comparable to standard treatment with triforine. Development of black spot symptoms (caused by D. rosae) was reduced by 32-54% due to garlic juice treatment while effectiveness of triforine at concentration of 0.03% reached 86% after 6 weeks and 70% after 11 weeks. Depending on concentration garlic juice efficacy against P. sparsa varied from 4% to 52% (with better results obtained for lower concentrations of the compound) comparing to 85% efficacy of oxadixyl. (see Abstract). Wojdyla et al further teach literature data suggest garlic juice used for treatment

of some vegetable seeds infected by Fusaruum oxysporum etc disinfected them and increased yield (page 254, 2nd paragraph).

Therefore, the reference is deemed to anticipate the instant claims above.

Claim Rejection -35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 16-21 are newly rejected under 35 U.S.C. 103(a) as obvious over Verma et al (Evaluation of botanicals in vitro against Fusarium oxysporum f.sp. pisi causing wilt of pea, Plant Disease Research (Ludhiana), (2003) Vol. 18, No. 2, pp. 131-134. 10 ref.).

This is a new rejection necessitated by the Applicant's amendment filed on 10/9/2008.

Verma et al teach garlic extract (Table 1) showed 100 percent inhibition of Fusarium oxysporum f.sp. pisi. Garlic extract showed zero percent growth in units of control (page 132, 1st column, last paragraph). Garlic allium sativum clove extract was completely inhibitory to the wilt pathogen and the growth rate of the fungus was recorded to be zero at 12 hr of incubation (see Abstract). After 24 h of incubation, no growth of the test pathogen was recorded in garlic extract at 5, 10, 20, and 25 percent concentration (thus approximately 10-30%). Among different concentrations of garlic extract tried, complete inhibition of Fusarium oxysporum f.sp. pisi was recorded at 25 percent concentration of the garlic extract followed by 66.26 percent inhibition at

20 percent concentration (page 132, 2nd column, 1st paragraph). The extract of different plant parts as mentioned above were prepared by macerating their tissues in distilled water (thus an aqueous liquid carrier) on weight/volumn (thus by volume) ratio. In all the cases, 25 g of the plant material was washed under the tap water, macerated in mortar with a pestle for 5 min by adding small quantity of sterilized distilled water and homogenized in an electric blender, with known volumn (50 ml) of the distilled water (thus a liquid fungicide) (page 131, 2nd column, 1st paragraph). The botanicals were added to sterilized Petri plates to study the inhibitory effect of botanicals in the mycelial growth of Fusarium oxysporum f.sp. pisi.

Verma et al do not teach applying the garlic extract to a plant or its growth medium.

It would have been obvious to one of ordinary skill in the art to apply the garlic extract to pea or its growth medium to inhibit fungal propagation or to prevent fungal propagation since Verma et al teach garlic extract at 25% concentration completely inhibit the fungus Fusarium oxysporum f.sp. pisi growth that causing wilt of pea. Since Verma et al teach the garlic extract was most effective and significantly inhibited mycelial growth of Fusarium oxysporum f.sp. pisi, one of the ordinary skills in the art would have motivated to apply the garlic extract to the plant to inhibit or prevent the fungal propagation.

From the teachings of the references, it is apparent that one of the ordinary skills in the art would have had a reasonable expectation of success in producing the claimed invention.

Thus, the invention as a whole is *prima facie* obvious over the references, especially in the absence of evidence to the contrary.

Claims 16-21 are newly rejected under 35 U.S.C. 103(a) as obvious over Wojdyla et al (Garlic juice in the control of some rose diseases, Bulletin of the Polish Academy of Sciences Biological Sciences, (2001) Vol. 49, No. 3, pp. 253-263).

This is a new rejection necessitated by the Applicant's amendment filed on 10/9/2008.

Wojdyla et al teach Biological activity of garlic juice at concentrations from 0.5% to 5% against rose pathogens Sphaerotheca pannosa var. rosae, Diplocarpon rosae, Peronospora sparsa and Botrytis cinerea was investigated. Effectiveness of the product was compared to untreated control and standard fungicides: triforine 0.03% (S. pannosa var. rosae and D. rosae), oxadixyl 0.016% (P. sparsa) and procymidone 0.05% (B. cinerea). Greenhouse-grown roses were sprayed when symptoms of powdery mildew occurred. After 2 and 4 treatments plant infection level was evaluated. Efficacy of garlic juice against D. rosae was tested on rosa cv. 'Madelon' cultivated in field. Effectiveness of tested chemicals was evaluated after 6 and 11 treatments applied weekly. Activity of garlic juice against P. sparsa was tested on rose shrubs grown in polytunnel after 4 treatments applied. Efficacy of the compound against B. cinerea was evaluated in the laboratory on scratched flower petals. The petals were dipped for few seconds in 0.5%, 2% or 5% water solution (thus an aqueous liquid carrier) of garlic juice (thus applying garlic juice to a plant), dried and subsequently inoculated with B. cinerea. 3, 5 and 7 days after inoculation necrosis diameters were measured. Depending on experiment, date of observation and concentration used, garlic juice showed from 20% to 95% efficacy against S. pannosa var. rosae which was comparable to standard treatment with triforine. Development of black spot symptoms (caused by D. rosae) was reduced by 32-54% due to garlic juice treatment while effectiveness of triforine

at concentration of 0.03% reached 86% after 6 weeks and 70% after 11 weeks. Depending on concentration garlic juice efficacy against P. sparsa varied from 4% to 52% (with better results obtained for lower concentrations of the compound) comparing to 85% efficacy of oxadixyl. (see Abstract). Wojdyla et al further teach literature data suggest garlic juice used for treatment of some vegetable seeds infected by Fusaruum oxysporum etc disinfected them and increased yield (page 254, 2nd paragraph).

Wojdyla et al do not teach the claimed concentration of garlic extract, or preventing the propagation of fungal species Fusarium.

It would have been obvious to one of ordinary skill in the art to increase the garlic extract concentration to 10-30% since Wojdyla et al teach increasing concentrations of garlic juice over 1% resulted in its higher activity. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. The differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). (Claimed process which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70% was held to be prima facie obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%.);

see also Peterson, 315 F.3d at 1330, 65 USPQ2d at 1382 ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); In re Hoeschele, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969) (Claimed elastomeric polyurethanes which fell within the broad scope of the references were held to be unpatentable thereover because, among other reasons, there was no evidence of the criticality of the claimed ranges of molecular weight or molar proportions.). For more recent cases applying this principle, see Merck & Co. Inc. v. Biocraft Laboratories Inc., 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989); In re Kulling, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990); and In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997). see MPEP § 2144.05 part II A. Although the prior art did not specifically disclose the amounts of each constituent, it would have been obvious to one of ordinary skill in the art at the time Applicants' invention was made to determine all operable and optimal concentrations of components because concentrations of the claimed components are art-recognized result effective variables because they have the ability to inhibit fungal propagation, which would have been routinely determined and optimized in the pharmaceutical art. It would also have been obvious to one of ordinary skill in the art to use garlic extract to prevent the propagation of fungal species Fusarium since Wojdyla et al teach garlic juice used for treatment of some vegetable seeds infected by Fusaruum oxysporum disinfected them and increased yield.

From the teachings of the references, it is apparent that one of the ordinary skills in the art would have had a reasonable expectation of success in producing the claimed invention.

Thus, the invention as a whole is *prima facie* obvious over the references, especially in the absence of evidence to the contrary.

Conclusion

No claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to QIUWEN MI whose telephone number is 571-272-5984. The examiner can normally be reached on Monday through Friday: 8: 30 am to 5: 00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TERRY MCKELVEY can be reached on 571-272-0775. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

QM

/Michael V. Meller/

Primary Examiner, Art Unit 1655